



**Before The
State Of Wisconsin
DIVISION OF HEARINGS AND APPEALS**

In the Matter of the Air Pollution Control
Construction Permit Issued to Midwest Energy
Resources Company, Superior, Wisconsin

Case No.: IH-02-04

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER

Pursuant to due notice hearing was held at Superior, Wisconsin, February 10-14, 2003 and March 11-14, 2003, Jeffrey D. Boldt, administrative law judge (the ALJ) presiding. The parties requested an opportunity to submit written briefs and the last brief was received on July 1, 2003.

In accordance with Wis. Stat. §§ 227.47 and 227.53(1)(c), the PARTIES to this proceeding are certified as follows:

Midwest Energy Resources Company (MERC), by

Attorney Thomas McElligott
Attorney William Harbeck
Attorney Jeffrey Morris
Quarles & Brady, LLP
411 East Wisconsin Avenue
Milwaukee, WI 53202-4497

Gordon Oftedahl, (the petitioner) by

Attorney Kelly Dahl
Attorney William Dittrick
Baird, Holm, McEachen, Pedesen, Hamann & Strasheim, LLP
1500 Woodmen Tower
Omaha, NE 68102-2068

Attorney Lauren Azar
Michael, Best & Friedrich, LLP
P. O. Box 1806
Madison, WI 53701-1806

Wisconsin Department of Natural Resources, (DNR or the Department) by

Attorney Marcia Penner
P. O. Box 7921
Madison, WI 53707-7921

OVERVIEW OF CLEAN AIR ACT SYSTEM
AND
SUMMARY OF ISSUES AND FINDINGS

The Clean Air Act assigns responsibility to both the state and federal governments for preventing and controlling air pollution. Congress has charged the U.S. Environmental Protection Agency (USEPA) with establishing national ambient air quality standards that protect human health and the environment. *See* 42 U.S.C. § 7409. Individual states have the opportunity to adopt statutes and regulations to achieve the federally established air quality standard within their borders. *See* 42 U.S.C. §§ 7407 and 7410. Once approved by USEPA, these state plans are referred to as “state implementation plans” and are enforceable by both the state and federal governments. *See id.*; *see also* 42 U.S.C. § 7413(a) and (b). *See: U.S. v. Murphy Oil, Inc.* 155 F. Supp. 1117 (W.D. WI, 8/1/01) USEPA has approved Wisconsin’s implementation plan for regulating standards of performance for new stationary sources, including Coal Preparation Plants pursuant to Wis. Admin. Code NR 440.42. The standards of performance are widely known as New Source Performance Standards. (NSPS)

As part of their preparation of implementation plans, states must designate those areas in their states in which air quality attains the standards set by the federal government. In those “attainment areas” states must implement and enforce a Prevention of Significant Deterioration (PSD) program that prescribes a pre-construction review process for large stationary sources of air emissions constructed or modified after October 24, 1974. All parties agree that the plant was constructed at a time when NSPS applied to the facility if it is a “coal preparation plant.” In Wisconsin, the Department of Natural Resources has had authority for this review process during all relevant times. *See*: Chapter NR 405

A source must undergo PSD review: if it is a major source or if it modifies an existing major source in a manner causing a significant net increase in emissions. For PSD purposes, a major source is one which has the potential to emit in excess of 250 tons per year (TPY) of any single criteria pollutant, unless it falls in one of 28 specifically designated industrial categories which have a major source threshold of 100 TYP. The parties have stipulated that the MERC facility is not a “coal cleaning” operation subject to the 100 tons per year limit. Accordingly, all parties agree that a potential to emit of 250 tons per year triggers PSD review.

NSPS are promulgated by the Environmental Protection Agency (EPA) under § 111 of the Clean Air Act (42 USC 7411). DNR has adopted the NSPS into its administrative code in Wis. Admin. Code ch. NR 440. According to Wis. Admin. Code § NR 440.42(1), the provisions of the section are applicable to any of the listed affected facilities in coal preparation plants

which process more than 200 tons of coal per day. Therefore, the first question is whether the MERC facility is a “coal preparation plant.” Wis. Admin. Code § NR 440.42(2)(c) defines a “coal preparation plant” as:

“... any facility, excluding underground mining operations, which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning and thermal drying.”

In the 1999 permit the DNR held that NSPS applied to the MERC facility. In the instant case, the DNR takes the position that NSPS no longer applies to the facility.

The following issues were noticed for hearing:

1. Is Midwest Energy Resources Company (MERC) a major source for purposes of DNR’s Prevention of Significant Deterioration (PSD) regulations? Short answer: Yes.

2. Should MERC be regulated under the PSD program and, if so, should a PSD review have been conducted as part of the Department’s evaluation of MERC’s permit application? Short answer: Yes.

3. Is Subpart Y and Wis. Admin. Code § 440.42 applicable to MERC’s processes? Short answer: Yes, because the MERC facility is a “coal preparation plant” which screens and breaks coal using “affected facilities.”

4. What is the proper calculation of MERC’s potential to emit (PTE)? Short answer: See below (a)-(d).

- a. Because MERC was regulated under the New Source Performance Standards (NSPS) pursuant to its 18 million tpy permit and the Final Permit, must the Department count fugitive emissions towards its determination of whether MERC is a major source? Short answer: Yes.
- b. May the Department reduce MERC’s PTE for the use of pollution-control efficiencies and other restrictions on emissions that are not required under its permit and not otherwise a federally enforceable condition of MERC’s operations? Short answer: No, because the PTE for PSD sources must be calculated using only federally enforceable controls and restrictions pursuant to Wis. Admin. Code § NR 405.02(25).
- c. Are the pollution-control efficiencies used by the Department in calculating MERC’s PTE excessive? Short answer: No, except that the facility should not be given credit for pollution control devices not subject to “federally enforceable” permit conditions.

- d. Is the Department's calculation of MERC's PTE incorrect and contrary to law given that the Department omitted any calculation of emissions from point sources at MERC including, but not limited to, P1N, P2N, P3N, and water cannons used to spray recycled water containing coal particulates into the air? Short answer: No, with respect to these point sources.

5. Should the Department have issued its May Order and Final Permit allowing MERC to increase its annual throughput to 25.5 million typ? Short answer: Not without PSD review.

6. Are there modeled exceedences of National Ambient Air Quality Standards (NAAQS) or permit conditions beyond MERC's boundaries that should have been reviewed prior to issuing the Final Permit? Short answer: Because the matter is remanded for PSD review, the answer to this question will be known only after an appropriate PSD review.

7. May the Department make material changes to its Preliminary Determination without notifying the parties, and without complying with Wis. Stat. §§ 285.61 and 285.62 or the Department's rules? Short answer: No, but in this case such error was harmless because of the instant contested case proceeding.

8. Should the Final Permit be stayed, vacated and reversed? Short answer: The permit is remanded for PSD review.

9. Did MERC submit a complete permit application and did the Department process the same in conformity with Wis. Stat. §§ 285.61 and 285.62 and the corresponding rules set forth at Wis. Admin. Code §§ 406 and 407? Short answer: This issue is resolved by the remand for PSD review.

FINDINGS OF FACT

1. Midwest Energy Resources Company (MERC), West Winter Street, Superior, Wisconsin, applied to the Wisconsin Department of Natural Resources (DNR) for an air pollution control construction permit to increase its coal handling throughput to 25.5 million tons per year.

2. On May 17, 2002, the DNR issued Permit N0-01-PJH-722 to MERC, subject to numerous conditions. (The 2002 permit, or the 25.5 million ton permit.)

3. On June 14, 2002, the DNR received a petition for a contested case hearing on behalf of Gordon Oftedahl.

4. On June 27, 2002, the DNR granted in part the request for hearing. On July 22, 2002, a request for hearing was forwarded to the Division of Hearings and Appeals, pursuant to Wis. Stat. § 227.43. The hearing was limited to the issues set forth above.

5. The DNR previously issued operation permit #816013330-F01 to MERC on January 25, 1999. (The 1999 MERC permit) This permit reflected a maximum coal handling capacity of 18 million tons per year.

6. The 1999 MERC permit issued by the DNR specifically found that the facility was subject to the provisions of Standards of Performance for New Stationary Sources (NSPS) 40 CFR Part 60 Subpart Y – Standards of Performance for Coal Preparation Plants (Subpart Y) and NR 440.42. Specifically, the 1999 permit stated “Midwest Energy Superior Terminal is subject to NSPS because the facility was modified or constructed after October 24, 1974.”

7. The DNR’s Preliminary Determination for the 2002 permit also found that the MERC facility was subject to NSPS. At the public hearing relating to the 25.5 million ton permit, Mr. Oftedahl, by his attorneys, argued that fugitive emissions should have been included in the calculation, as part of the Potential to Emit (PTE) and the major source threshold, given the DNR’s determination that the facility was subject to Subpart Y and NR 440.42.

8. After Oftedahl raised these concerns at the public hearing, the DNR reversed its long-standing position with respect to the applicability of the NSPS to the MERC facility. Further, the DNR did not “public notice” its new determination. Instead, the DNR sought to have MERC voluntarily agree to meet NSPS emission limitations, without otherwise accepting the applicability of the NSPS or undertaking a Prevention of Significant Deterioration (PSD) review. MERC consented, and a footnote was added to the 2002 permit, which reflected MERC’s voluntary consent to meet the 20 percent opacity limitation for visible stack emissions found in Wis. Admin. Code § NR 440.42(3)(c).

9. The MERC facility is a coal storage, loading and trans-shipment operation located in the City of Superior on Lake Superior. It has operated at the site since 1976. It is one of the largest such facilities in North America. (Schusterich) MERC receives and unloads railcars of coal, primarily from the Powder River Basin in Wyoming and the western U.S. A small percentage comes from the Hanna Basin, also located in Wyoming. Both are good sources of relatively low-sulphur, subbituminous, exothermic (heat releasing) coal. MERC has been innovative and has made considerable capital expenditures in seeking to reduce coal emissions from its operations. MERC pioneered the use of irrigation spray “cannons” to reduce coal dust emissions. (TR, p. 2415; Ex. 3) Plans are underway to install new systems to further reduce dust emissions. (TR, pp. 2416-20) This was done voluntarily by MERC. (TR, pp. 2415-16)

10. The coal arrives at MERC facility after processing prior to shipment. The MERC facility does not crush coal with a “crusher” or reduce the size of coal with a “breaker.” Rather, the coal arrives essentially pre-sized to a standard of less than two inches in diameter (Schusterich) A rail car loaded with coal enters a railroad car dump building, where each car is rotated upside down. The coal is dumped over a large steel grate, known as a “grizzly”, which has 12 inch by inch openings. Each railroad car represents approximately 115 tons of coal.

After passing through the grate, the coal is deposited into large hoppers. Subsequently, coal is transported from the hoppers by two belt feeders. The coal on the belt conveyors passes under a magnet, which removes so-called “tramp iron” and other metals. The magnet is there in the event that pieces of metal that get through the grate do not damage conveyor belts or equipment. (*Id.*) Further, MERC has specific contractual obligations to at least one of its customers to remove “tramp iron” and other debris from coal shipped to the customer. (TR, p. 2451) When the coal is unloaded it trowels by conveyor to large storage piles. There are “plow feeders” under the storage piles, which put the coal on a series of conveyors until it is loaded onto ships. (TR, pp. 1785-1808)

11. The point at which the coal is removed from the railcars and the points at which a conveyor to conveyor transfer is made are referred to as processes P30 through P36. The location of these points are depicted on Exhibit 22. Processes 30-36 are referred to as the “point” or “stack” emission sources at MERC. Other potential sources of emissions at MERC, e.g., the coal storage pile, are regulated as “fugitive” sources. (Ex. 15)

12. A threshold question is whether the MERC facility is “a coal preparation plant.” The DNR recently determined that MERC is not a “coal preparation plant” because MERC does not “prepare[] coal by . . . breaking, crushing, screening, wet or dry cleaning or thermal drying.” (TR, pp. 1416-1434, 1505-1516 and 1696; Ex. 114 and Ex. 119, pp. 4-9) After the petitioners objected to the DNR’s failure to include “fugitive” emission in its calculation of PTE, the DNR changed its prior determination and determined that the MERC facility had to meet the definition of a “coal preparation plant” to be regulated under NR 440.42. However, both sides essentially agree on this point.

It is not enough to subject the MERC facility to subpart Y simply because MERC employs “affected facilities,” including coal processing and conveying equipment and transfer and loading systems, if MERC is not considered a “coal preparation plant.” (Holmbeck, TR, p. 1470; Hanson, TR, p. 1509) Even the petitioner’s expert, Mr. Carlson, agreed that would be a mistaken interpretation of the regulation. (Carlson, TR, p. 439) Accordingly, the central question is whether or not the MERC facility “prepares” coal pursuant to one of the listed processes.

13. The MERC plant does not “crush” coal within the meaning of Wis. Admin. Code NR 440.42. In general, breakers and crushers are understood in the coal industry as heavy equipment expressly designed and utilized to reduce the size of coal. (TR, pp. 2140-2141; Ex. 82) As noted, all coal delivered and shipped to MERC and from MERC has already been broken and crushed at the source mines in Wyoming and Montana. Any “crushing” which occurs as a result of the use of the “plow feeders” is incidental and does not subject MERC to NSPS regulation. (TR, pp. 1865-1866; 2140-2144)

However, significant “breaking” of coal does occur when shipments are dumped over the metal grizzly/grate. The video tape made by the petitioner’s experts clearly demonstrates that 115 tons of coal falling on the “grizzly” breaks the coal, causing release of a large amount of coal dust and noise resulting from the coal hitting the screen. (Ex. 56)

Further, “breaking” of frozen coal and/or chunks of ice is a fairly regular occurrence, also at the grate location. Mr. Elder and Phyliss Holmbeck each stated that in the winter, coal arriving by rail is frozen together on occasion. This “frozen coal” is poured over the “grizzly” with the other 115 tons of coal contained in the rail cars, and as Ms. Holmbeck testified, it is likely that the frozen coal and even unfrozen coal breaks over the top of the grizzly. (TR, p. 1114-1116) Mr. Elder testified that the coal sometimes comes lumped in snow and ice and breaks over the grizzly. (TR, pp. 1860-1861) Facility personnel break up frozen and or ice coal trapped on top of the grizzly with a sledgehammer. (*Id.*) MERC documents show that occasionally the unwanted frozen coal is cleaned off of the grizzly. (Ex. 45)

Elder also acknowledged that coal “breaks” from the force of dumping over the grate. (TR, p. 1860) Given the quantity of coal shipments which pass through the MERC facility, emissions from the “breaking” of coal over the grizzly grate are significant and subject the facility to Subpart Y regulations even though the facility is not reducing the size of coal by a classic “breaker” device. (Carlson; Ex. 78)

14. The MERC facility “screens” coal by means of the “grizzly” grate. The grizzly serves as a device for separating material according to size by passing undersize material through the grid surface of the grate and retaining oversize material on the grate surface. The grizzly grate is a “grizzly” within the meaning of NR 400.02(141). The grizzly grate screens out oversize materials from the “coal conveying equipment” at the MERC facility.

Marshall Elder, MERC’s General Superintendent, testified that MERC has a large metal grate known as a “grizzly” placed over hoppers that receive coal from rail cars. The grizzly protects the MERC equipment from damage by unwanted materials and serves as a safety device in protecting workers from the full weight of coal dumped into the hopper. (TR, p. 2401) Elder stated that one purpose of the “grizzly” is to separate oversized material from coal such as bicycles, computers, metal, pieces of mining equipment and the like. (TR, p. 1859) Mr. Shusterich testified that he has seen pieces of standard main rail line, tree branches, and other items removed by the grizzly. (TR, p. 2248) Exhibit 45 is a record of shutdowns at the MERC facility relating to finding oversize, unwanted materials. It is 48 pages in length—each reflecting a separate incident. Exhibit 45 demonstrates that the grizzly regularly serves to “screen out” oversize material from the coal stream. The most frequently occurring item is “tramp metal.” After being presented with a contract, Mr. Shusterich admitted that its customer, the nearby Municipality of Duluth, required that MERC remove such tramp iron and other debris from coal provided to the City. (TR, p. 2451)

Similarly, the DNR permit engineer, Ms. Phyliss Holmbeck testified that the MERC facility has a grizzly. (TR, p. 1114) She first learned of this after the new permits for 25.5 million tons per year had been issued. (TR, pp. 1114-1115) At trial she read from MERC documents (Ex. 45) that MERC is “cleaning frozen coal off grid,” and that she was sure that large chunks of frozen coal “probably was broken” by the grizzly. (TR, p. 1120) She further admitted that the grizzly is utilized to remove tramp iron from the coal stream. (*Id.*) Both Ms. Holmbeck of the DNR and Mr. Carlson, the petitioner’s expert, testified that the definition of “screening” means separating material by size, including separating two different materials by size.

MERC screens out tramp iron and other non-coal debris as well as oversize or frozen ice and/or coal. A preponderance of the evidence supports a finding that the MERC facility utilizes a “grizzly” grate to separate both coal and non-coal material by size, and thus “screens” coal as part of its operations. (Carlson; Ex. 45; Ex. 78)

15. The USEPA has determined that the use of a grate bar screen to break up frozen coal and to remove ice chunks from coal at a coal trans-shipment facility is a coal preparation plant and subject to NSPS. See Ex. 78. The Seward Coal Terminal determination letter states:

The facility receives coal by railcar and loads coal onto ships in the Seward Port. As part of this process, Suneel Alaska at times uses a bar screen to break up or screen out chunks of ice that form with the coal, in order to convey it to a ship.

. . .

. . . Region 10 concurs with the determination already made by Region 7 that a facility that processes ice encased coal is a “coal preparation plant” and is subject to the rule. . .

Region 10 believes the bar screen at Suneel Alaska falls under the definition of “coal processing and conveying equipment because it reduces the size of coal and/or removes refuse, by breaking, crushing or screening frozen coal. In addition, the transfer and loading equipment would likely fall into the category of “transfer and loading system.” (emphasis added) (Ex. 78)

Mr. Hanson of the DNR discussed the Seward facility with the Alaska regulator and wrote: “This facility sounds very similar to the one we are working on here.” (Ex. 133) The petitioner’s expert, Mr. Carlson, also interviewed the facility consultant who handled permitting for Seward Terminal to get a better feel for the impact of the applicability determination. The consultant told him that the facility received frozen coal on a rare occasion and used a type of bar screen to break up frozen coal. (TR, p.154) Like the grizzly grate at the MERC facility, the Seward screen is solely used to prevent the hopper from clogging and for safety purposes. (TR, p. 156)

16. The MERC facility does not “clean” “refuse” from coal by means of the grizzly/grate. MERC argues that in the context of Wis. Admin. Code NR 440.42, the term “refuse” should be understood to mean “coal refuse.” “Coal refuse” consists mainly of unsalable coal, shale, bone, calcite, gypsum, clay, pyrite, or marcasite. (Ex. 273, pp. 17-38) Alternatively, “refuse” is defined in Chapter 285, relating to “air pollution,” in Wisconsin, as follows: “(r)efuse means all matters produced from industrial or community life, subject to decomposition, not defined as sewage.” Wis. Stat. § 285.01(35)

The grizzly/grate has on rare occasions “separated refuse from coal,” within the meaning of Wis. Admin. Code § NR 440.42(2)(d). Such refuse has included several human bodies, obviously “subject to decomposition.” However, unlike the tramp iron, such occasions are rare and are not sufficient in themselves to subject MERC to NSPS status. The removal of tramp iron from coal by means of the magnet separator does not constitute the removal of “refuse” because

such iron is not “subject to decomposition.” Rather, removal of tramp iron by the magnetic separator is part of the “screening process.” (Carlson; Ex. 45)

The MERC facility does not “clean” coal within the meaning of NR 440.42. The parties agree that MERC does not do “wet or dry cleaning” or operate any “thermal dryers” as coal cleaning equipment. The grate and magnetic separator do not clean coal in the context in which the coal industry understands that term. (Shusterich, TR, pp. 2381-2382) No dryers or other cleaning equipment is utilized at the MERC facility.

17. The MERC facility is a “coal preparation plant” subject to subpart Y and Wis. Admin. Code § NR 440.42. (Carlson; Ex. 78)

18. The MERC operation employs several “affected facilities” within the meaning of subpart 4 and Wis. Admin. Code § NR 440.42. The MERC operation utilizes “coal processing and conveying equipment. . . used to . . . separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery.” This includes the grizzly/grate “screen” and “conveyor belts” as defined in Wis. Admin. Code § NR 440.42(2)(d). (Carlson)

19. The MERC operation is an “affected facility” because it includes an extensive “(t)ransfer and loading system used to transfer and load coal for shipment” within the meaning of Wis. Admin. Code § NR 440.42(2)(i). (TR, p. 144; 168; Ex. 78; Ex. 286)

20. The DNR utilized reasonable emission factors in calculating the potential to emit. The DNR permitting engineer, Ms. Holmbeck, used emission factors from “Fugitive Emissions from Integrated Iron and Steel Plant.” (Ex. 100) The previous compliance engineer had researched this issue and concluded that the Iron and Steel Emission Factors were appropriate. (Holmbeck, TR, pp. 1413-1414) The petitioners argue that the factors from EPA AP40 were newer and should have been used instead of the Iron and Steel Factors. However, a preponderance of the credible evidence supports the use of the Iron and Steel Factors, because these factors reflected a better quality rating than the factors set forth in AP40. (Holmbeck, TR, p. 1413; Klafka, TR, pp. 2076-2077)

21. The DNR utilized reasonable “control efficiencies” in calculating the MERC facility’s “potential to emit.” (Holmbeck, Klafka) In the Preliminary Determination, Ms. Holmbeck applied the control efficiencies only for the water sprays, wet scrubber and baghouses and found that the total potential to emit solely from “point sources” at the facility was 189.05 tons per year. Ms. Holmbeck used a 99.9% control efficiency for the baghouses, which all witnesses seem to agree is a reasonable control efficiency. She applied 85% control efficiency for the water sprays throughout the facility and 85% control efficiency for the wet scrubber. (Ex. 110, p. 17) The manufacturer of the wet scrubber suggests a 99.5% control efficiency, so 85% is a conservative estimate of its efficiency. (Holmbeck, TR, p. 1441; Baudhuin, TR, p. 1775; Klafka, TR, p. 2056) Ms. Holmbeck explained the basis for the 85% control for water sprays as follows: the control efficiency had been changed in the air emission inventory from 80% to 85%, based on her review of the particle size of the coal dust and references which had control efficiencies for water sprays which ranged from 70 to 95%. She noted that she saw a 95% control efficiency for particles under 10 microns in size and felt that raising the efficiency to

85% was not unreasonable. (Holmbeck, TR, p. 1147) She pointed out that the larger the particle size, the greater the control efficiency. (Holmbeck, TR, p. 1441) Mr. Baudhuin agreed that she used reasonable control efficiencies in the Preliminary Determination. (Baudhuin, TR, p. 1692) Mr. Carlson agreed that one does not have to use the lowest control efficiencies available. (Carlson, TR, p. 411-412)

The only significant change in the use of these control efficiencies warranted by the record, is that MERC should not be given credit for controls which are not federally enforceable. (Carlson; See: Conclusion of Law #8) Under the permit, the baghouses are not required to be used for any set period of time. There is no dispute in the record that the baghouses have not been regularly used at all by MERC until fairly recently. In considering the PTE and in related modeling, it was unreasonable to assume that the rate of emissions from baghouses equipped point sources would constantly be the winter-rate which reflects the use of baghouses. (Carlson; Holmbeck, TR, pp. 1220-1229) In fact the parties stipulated that the summer rate would be 350 times higher. (Id.)

22. The DNR properly determined that the water cannons used to wet the coal piles should not be considered a “point source” of particulates. The water cannons are an effective and innovative system of dust suppression. The DNR reasonably concluded that this control device is not a “point source” of emissions, even though some aerosol spray of water does leave the property in connection with the use of the water cannons. (Holmbeck; Baudhuin; Klafka)

However, the petitioners demonstrated that the use of dirty “moat water” as a source of the water cannon spray could lead to “fugitive emissions” migrating off-site. Accordingly, the permit should be modified to require use of well water, lake water, or treated moat water as the principal source of water for the cannon sprays. (See: Finding 29)

23. The DNR reasonably concluded that the “reclaim tunnel” is not a significant source of emission. The tunnel is underground and is approximately ¼ mile long. There is ventilation system in the tunnel, which is utilized when MERC employees are in the tunnel. (Elder, TR, p. 1838) Any emissions from the ventilation system fan outlet are negligible, given that the great bulk of coal dust will stay underground and not be released into the ambient air. (Holmbeck; Varkharia; Baudhuin; Klafka)

24. All parties agree that if PSD regulations applied to the MERC facility at the time of its application for the 25.5 million tons per year permit, the permit should not have been issued without undergoing PSD review. (Ex. 83) Ms. Holmbeck testified that if Wis. Admin. Code § NR 440.42 is applicable to MERC, then PSD review was required for the 25.5 million tons per year permit. (Holmbeck, TR, p. 1129) Further, fugitive emissions should be included in the calculation of the potential to emit under the PSD review. (Holmbeck, TR, p. 1087)

25. By the DNR’s own calculations, the MERC facility potential to emit for 25.5 million tons per year permit grossly exceeds the 250 tons per year threshold, when fugitive emissions are included in the calculation. (Holmbeck) In the Preliminary Determination, Ms. Holmbeck calculated a PTE of 189.05 tons per year for point source emissions and a PTE of

428.6 tons per year for a total of 617.68 tons per year. (Holmbeck, TR, pp. 1107-1109; Ex. 18, Table 14)

Further, the fugitive emission calculation likely underestimated the PTE because it was based upon an inaccurate area for the coal storage pile. In her PTE calculations for the 25.5 million-ton per year permit Holmbeck used a potential of 50.6 acres, the same as she used for the 18 million per year permit. However, MERC admitted that the potential coal storage acreage would increase to at least 80 acres under the 25.5 million-ton per year permit. (Vizanko, TR, p. 1293) The potential to emit fugitive emissions is significantly greater than the potential to emit from point sources at the facility.

There is no question that the increase from 18 million tons per year to 25.5 million tons per year is a “major modification” that results in a “significant net increase in emissions” within the meaning of Wis. Admin. Code § NR 405.02(21) and (27). The net emissions increase is greater than 25 tons per year for particulate matter. (Holmbeck; Carlson)

26. The DNR conducted limited but appropriate modeling in connection with its review of the permit application. The DNR’s own PTE calculations predicted much greater potential emissions from fugitive sources than from point sources, yet the DNR did not model for fugitive emissions. However, the DNR modeling team leader, John Roth (Roth), testified that USEPA gives individual states discretion as to whether fugitive emissions should be modeled. (Roth, TR, p. 638) This is true for both PSD and non-PSD sources. (Id.)

All parties agreed that the modeling of fugitive emissions is technically challenging. Roth testified that this is because it is difficult to determine what emission factors to use, what activity level to assume, the moisture and silt content of the material being handled and the other inputs into the model such as the height, diameter and flow rate of the pollutant plume. (Roth, TR, p. 631) Roth stated that the DNR determines whether to model fugitives on a case-by-case basis. (Roth, TR, p. 631) When the decision is made not to model fugitives, the DNR often requires fugitive dust plans, opacity measurements, watering and ambient monitoring. These requirements are found in the MERC permit. (Id.) Both the DNR’s Mr. Roth and Mr. Klafka agreed that the ISC can be used to model fugitive cool dust emissions. (TR, p. 659) It is surprising that the DNR did not make some effort to model fugitive emissions, given the Department’s reasonable conclusion that fugitive emissions constituted the greater tonnage of emissions. The DNR has first-rate modeling experts available, and it would be expected that they would make some effort at modeling MERC’s fugitive emissions before concluding that it is too difficult.

However, further modeling will be required in conjunction with PSD review. The record supports the need for further modeling, given the preliminary modeling undertaken by Mr. Carlson predicted exceedances in the exact area where numerous recent exceedances have been recorded by air monitoring. (TR, pp. 2514-2517; Compare Ex. 107, 63 and 64)

27. The DNR erred in not giving proper public notice of the substantial change in the regulatory status of the MERC air permit. There is no question that the MERC facility was being regulated under Wis. Admin. Code § NR 440.42 and Subpart Y under the express terms of the

1999 permit. The permit holder did not object to such treatment. However, when the public comment period was held in connection with the revised 25.5 million ton per year permit, the petitioner pointed out that fugitive emissions should be included in the PTE calculation given the regulatory status of the 1999 permit. Rather than concede its error in this regard, the DNR undertook a substantial change in the permit—striking the NSPS designation in return for a “voluntary consent” to the opacity requirements of such a permit—without providing proper public notice of the significance of the change. When the DNR made this substantial change in the permit, it resulted in more relaxed permitting standards being applied to the MERC permit application. Even MERC’s own expert, Mr. Klafka, conceded that a more relaxed regulatory standard requires a second public notice and comment under DNR practice. (TR, p. 2322) MERC was relieved of the more rigorous PSD regulations as a result of a private exchange of letters between the DNR and the permit holder. This deprived interested parties of a meaningful opportunity for comment. The DNR sought comments on a construction permit ostensibly governed by NSPS standards, but subsequently issued a construction permit for a more relaxed set of standards. In particular, the permit was issued without a PSD review.

The public comment process would have little meaning if such practices were regularly followed. Fortunately, as Mr. Klafka noted, this is not how the DNR usually operates. (TR, p. 2327) However, in this instance the DNR was aware that a contested case would follow. The same issues which would have been addressed in the public comment period have been considered in detail here. Accordingly, the Department’s failure to re-notice the permit is harmless error.

28. Mr. Gothblad testified concerning the monitoring results in the vicinity of MERC, which are contained on Exhibit 107. Exhibit 107 shows exceedances at monitoring sites near MERC for the years 1997 through 2002. It shows that MERC was found culpable for one exceedance in 1997. (Gothblad, TR, p. 1619) Mr. Gothblad stated that there were 2 exceedances at 2 different monitors in 2001, but culpability for those exceedances has not yet been determined. (Gothblad, TR, p. 1620) The same is true for 2 more exceedances, which occurred during 2002.

Mr. Baudhuin explained that DNR monitoring staff determines where monitors should be placed based on prevalent wind direction in the area, modeling demonstrations and then looking for an available site to place a monitor. (Baudhuin, TR, pp. 1711-1712) Mr. Baudhuin testified that it has not been demonstrated that MERC caused air quality violations. (Baudhuin, TR, pp. 1777-1778) However, at a minimum the monitoring exceedances demonstrate that the “background” levels are likely rising. (Id., Carlson)

29. The record supports revised permit conditions either in conjunction with a PSD review, or in the event the remand for further review is reversed upon appeal.

The water tower cannons should use far less dirty moat water than has been the regular practice of MERC. The permit-holder indicated at hearing that it would voluntarily agree to a permit condition requiring the use of lake-water or clarified (treated) moat water under most operating conditions, with exceptions available when the clarifier is reasonably not available for

use by the permit-holder due to maintenance, weather, or storage system capacity issues. (TR, pp. 2430-32)

The baghouses shall be operated at all times except for reasonable maintenance or weather related circumstances. (Baudhuin; Shusterich; Carlson)

Encrusting agents acceptable to the DNR shall be employed around the edge of the coal pile in a width and manner described to be set by the Department whenever the bank and/or berm of the coal pile is inactive for a period of 60 days or more. (TR, pp. 2419-18)

Air monitoring shall include a new monitoring device in the area of monitors 35 and 36, as this coincides with both the area most subject to recent monitoring exceedance and predicted exceedances in modeling undertaken by Mr. Carlson. (Exs. 63-64; 107; TR, pp. 2514-17)

DISCUSSION

The DNR took diametrically opposed positions with respect to the applicability of the NSPS standards for the 1999 permit and the 2002 permit. A preponderance of the credible evidence, as well as established USEPA policy and prior determinations, support a finding that the DNR was correct in 1999 that the NSPS for coal preparation plants applied to the MERC Superior facility.

The MERC facility is a “coal preparation plant” because it “screens” out oversize or frozen coal, by means of a grizzly/grate and non-coal items including tramp iron, by means of a grizzly and the magnetic separator within the meaning of Wis. Admin. Code NR 400 and NR 440.42. The facility also “breaks” millions of tons of coal over the same grizzly grate when train-cars of coal are dumped in preparation for shipment to MERC’s customers. The facility “screens out” and “breaks up” ice and or frozen coal which will not pass through the grate. Further, “preparation” of the coal by such screening is expressly required by contract by at least some of MERC’s customers. MERC’s contract with the City of Duluth requires that the coal “be substantially free of impurities and foreign matter such as, rock, pyrite, wood, tramp metal, and mined debris.” (TR, p. 2451) (emphasis added) The record was clear that all of the emphasized materials have been removed from the MERC “grizzly/grate” and or magnetic separator. Some DNR witnesses opined that the definition of “screening” contained in § NR 400.02(141) is inapplicable to the facts of this case. However, this assertion conflicts with the plain language of NR 400.01, which provides that the general definitions apply to NR 440, in the absence of specific definitions in particular sections which are contrary to the general definitions.

This chapter applies to terms, units, and abbreviations used in Chs. NR 400-499. In addition to the definitions in this chapter, other definitions may be included in individual chapters or sections in Chs. NR 401-499, which are applicable to terms, units or abbreviations used in those respective chapters or sections. If an individual chapter or section defines a term, which is also defined in this chapter, the definition contained in the individual chapter or section shall apply within that

chapter or section, rather than the definition in this chapter. Wis. Admin. Code § NR 400.02(141)

There is no definition of “screening” in NR 440.

The DNR and the permit holder rely heavily upon the 1985 USEPA policy statement entitled “Clarification of NSPS Applicability to Coal Preparation Plants.” (Ex. 129) However, a later statement of USEPA policy is found in the “Second Review of New Source Performance Standards for Coal Preparation Plants” formulated in 1988. (Ex. 82) There is considerable conflict between these two documents.

The 1985 memorandum, states as follows:

If the plant prepares coal by one of these processes and the coal processing capacity exceeds 200 TPD, then Subpart Y would be applicable. You should be aware that other source types (i.e., power plants and kraft pulp mills) which prepare coal by one of these five processes may also be covered by the standards if they process more than 200 TPD coal. Facilities which only handle or transfer coal (i.e., trans-shipment facilities) are not currently regulated by the standards.

Once a source is identified as a coal preparation plant which processes 200 TPD coal, any of the following would be affected facilities: thermal dryers processing bituminous coal, pneumatic coal cleaning equipment processing bituminous coal, coal processing and conveying (including crushers and breakers coal storage systems (excluding open storage piles coal transfer and loading facilities (Ex. 129)

The 1988 Second Review of New Source Performance Standards directly contradicts this language—with respect to large loading facilities such as the MERC Superior plant.

The NSPS for coal preparation plans clearly states that the regulation applies to any plant which processes more than 200 tons per day and includes any of the following operations: “Thermal dryers, pneumatic coal-cleaning and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems.” The scope of applicability, therefore, includes many facilities at stationary sources not commonly referred to as “coal preparation plants.” These include large power plants, coke oven batteries, **and large loading facilities.** (emphasis added) (Ex. 82, § 5.1)

The Seward Coal Terminal, operated by Suneel Alaska Corporation, located in Seward, Alaska was determined to be an “affected facility” subject to the NSPS Subpart Y Standards of Performance for Coal Preparation plants. Like MERC, the Seward facility receives coal by railcar and loads coal onto ships in the Seward port. As part of

this process, Suneel Alaska at times uses a bar screen to breakup or screen out chunks of ice that form with the coal, in order to convey it to a ship. (Ex. 78)

USEPA Region 7 determined that Subpart Y was applicable to the Seward Coal Terminal. Further, the determination by Region 7 was supported by USEPA Region 10, which also reviewed the facility to determine if Subpart Y was applicable.

The statement of USEPA Region 10, accepting the reasoning of Region 7, could be applied to the MERC facility without changing a word.

The facility receives coal by railcar and loads coal onto ships in the Seward port. As part of this process, Suneel Alaska at times uses a bar screen to break up or screen out chunks of ice that form with the coal, in order to convey it to a ship. (emphasis added)

At your request, EPA Region 7 recently reviewed the NSPS Subpart Y rule for applicability to the Suneel Alaska facility. Region 10 concurs with the determination already made by Region 7 that a facility that processes ice-encased coal is a “coal preparation plant” and is subject to the rule, as long as it processes more than 200 tons per day, was constructed or modified after October 24, 1974 and has equipment defined in the rule (see § 60, 250, Applicability and § 60.251, Definitions).

Region 7 examined the original preamble to the rule. The Federal Register dated January 15, 1976, Page 2232, states “(o)nly sources which break, crush, screen, clean or dry large amounts of coal were intended to be covered. Sources which handle large amount of coal would include coal handling operations at sources such as barge loading facilities, power plants coke ovens, . . .” Further, the Federal Register dated October 24, 1974, Page 37922 states “(s)ince there is no basic difference in the mechanical processes of breaking, crushing, and screening coal, whether they occur at the mine or at some other location, the applicability of the standard was expanded to encompass those processes regardless of their location.” Thus, Region 7 determined that a facility such as Suneel Alaska is a “coal preparation plant” and subject to the rule if the facility is conducting breaking, crushing, screening, wet or dry cleaning, or thermal drying, regardless of where located.

Region 10 believes the bar screen at Suneel Alaska falls under the definition of “coal processing and conveying equipment” because it reduces the size of the coal and/or removes refuse, by breaking, crushing or screening the frozen coal. In addition, the transfer and loading equipment would likely fall into the category of “transfer and loading system.”

In summary, Region 10 believes the facility is subject to NSPS Subpart Y. Therefore, the facility should apply for a Title V permit. (Ex. 78)

The DNR and MERC both argue that both USEPA Region 7 and Region 10 made a “mistake” in interpreting the applicability of NSPS subpart Y to the Seward coal terminal. However, under the “*Chevron* doctrine” set forth by the United States Supreme Court, the USEPA’s interpretations of statutes and agency-wide policy are given considerable deference in the interpretation of the Clean Air Act Amendments, and the NSPS program in particular. *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 US 837 (1984) *Chevron* was recently cited by U.S. 7th Circuit Court of Appeals for the proposition that the EPA’s reasonable interpretation trumps a conflicting state reading of a statute or regulation. *State of NY v. EPA*, 133 F.3d 987 (7th Cir., 1998) [“The EPA’s interpretation of section 182(f) is at least as plausible as New York’s, and that makes this an easy case under the *Chevron* doctrine.”]

Further, since DNR’s standard is based on EPA’s standard, EPA interpretations of its standard should be consulted for guidance and assistance. *See, State v. Poly-America, Inc.*, 1654Wis. 2d 238, 245, 474 N.W.2d 770, 773 n. 4 (Ct. App. 1991) (“When a state regulation is based upon a federal standard, courts look to the federal interpretation of that rule for guidance and assistance.”)

Meanwhile, the deference owed to the Wisconsin DNR is limited by the fact that the Department took diametrically opposed positions with respect to NSPS subpart Y applicability in the 1999 and the instant permits. The Department was not even aware of the grizzly until after the 25.5 million ton permit was issued. (TR, p. 1127) Further, the Department erred in not counting “fugitive emissions” when it was, by the express terms of the 1999 permit and through the time of the Preliminary Determination, regulating the MERC facility under the NSPS. Under these unique circumstances, the determinations of the USEPA are far more persuasive and worthy of deference over the Department’s position as set forth prior to and during the contested case proceeding. In any event, it is clear that the deference is owed to the final legal decision of the DNR, after the full evidentiary record is made and the opportunity for review to the DNR Secretary. *See: Sea View Estates Beach Club v. DNR*, 223 Wis. 2d 138 (Wis. Ct. App. 1998)

MERC relies heavily on definitions set forth in a 35-year-old manual of the coal industry. While this information was useful in understanding some practices as they relate to coal, it is far less persuasive than the recent EPA guidance documents and applicability determinations which have directly addressed similar coal trans-shipment questions. Further, while the descriptions of coal industry history and practice provide a background for an understanding of some of the terms found in NR 440.42, they are not the last word in the regulatory significance of such terms. The focus of the EPA determinations has not been on whether the equipment conforms with coal industry terminology, but rather whether the activity of “breaking” or “screening” occurs at coal trans-shipment plants employing “affected facilities.”

The MERC facility is the largest coal trans-shipment facility in the United States and possibly in North America. It is the very definition of the “large loading facility” described in the USEPA’s 1988 Second Review as being specifically subject Subpart Y requirements. (Ex. 82) The USEPA has applied these requirements to coal trans-shipment facilities, such as the Alaska Seward port, that handle far less coal than the MERC operation (four percent of the MERC total by calculation of counsel). Further, the USEPA Region 5, has specifically found that Subpart Y applies even where the screening process is “ancillary” to the main purpose of

coal handling operation. (Ex. 286, C. Reiss Coal, 12/17/01) While the C. Reiss Coal facility actually separated fine coal from coarse coal, the same logic applies here.

It does not make regulatory sense that the largest coal trans-shipment facility in the United States would be exempt from PSD regulations because it screens out oversize material other than coal. This is especially true given that the MERC facility has a contractual obligation to deliver coal free of such materials to its customers. It is, by contract, “preparing coal” for use by its customers.

There have been recent multiple offsite exceedances of air standards, and one possible violation, recorded at monitors placed in the area that Mr. Carlson’s modeling suggested would be impacted by increased MERC emissions. (Ex. 107, 63 and 64, TR, pp. 2514-2517) While it is not clear that this has been caused by MERC emissions, at a minimum, they suggest that there is less margin for error as “background” particulate emission numbers have risen. This is exactly the situation which the PSD regulation were designed to address, to prevent attainment areas from becoming “non-attainment” areas. An increase of 7.5 million tons of coal modifies this existing major source in a manner causing a significant increase in air emissions.

The MERC facility is a coal preparation plant and is subject to PSD review. The permit must be remanded back to the DNR.

CONCLUSIONS OF LAW

1. The Division of Hearings and Appeals has authority to hear contested cases relating to air pollution permits pursuant to Wis. Stat. §§ 227.43 and 285.81(a). “Following the hearing the department’s action may be affirmed, modified or withdrawn.” Wis. Stat. § 285.81(1)(b).

2. The provisions of Subpart Y are applicable to any of the following affected facilities in coal preparation plants which process more than 200 tons per day: thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems and coal transfer and loading systems. § NR 440.42(1) The parties stipulated that the MERC facility processes more than 200 tons per day of coal. The MERC facility is a “coal preparation plant” within the meaning of the above sections because it uses “coal processing and conveying equipment” and “coal transfer and loading systems” to convey coal to and from the hopper grizzly/grate which screens and breaks coal.

3. A coal preparation plant is defined as any facility, excluding underground mining operations, which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning and thermal drying. Wis. Admin. Code NR 440.42(2)(c) The MERC plant “screens” coal in preparation for trans-shipment and thus meets the definition of a coal preparation plant. The MERC facility also “breaks” coal in connection with its use of coal processing and conveying equipment.

4. The “Air Pollution Control Definitions” found in Chapter NR 400, including the definition of “screening” are applicable to the MERC facility under Wis. Admin. Code § NR 440.42 in the absence of another definition of NR 440. Wis. Admin. Code § NR 400.02(141). There is no specific definition in NR 440.42.

5. “A screening operation” for purposes of NR 400 to 499 means a device for separating material according to size by passing undersize material through one or more mesh surfaces, screens or similar surfaces in series, and retaining oversize material on the mesh surfaces, screens or similar surfaces. Screening operations include any grizzly, rotating screen or deck type screen.” Wis. Admin. Code NR 400.02(141). The “grizzly” grate at the MERC facility is a “screening operation” within the meaning of the Wis. Admin. Code.

6. The MERC facility does not operate a “crusher” as defined by Wis. Admin. Code § NR 400.02(51).

7. The MERC facility does not clean coal by “wet or dry cleaning” or by “thermal drying” within the meaning of NR 440.42(2)(c).

8. The “potential to emit” (PTE) means the maximum capacity of a stationary source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of the material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the administrator. Wis. Admin. Code § NR 400.02(127).

9. Wisconsin law provides that a “substantial change” to an administrative action justifies new procedural action. *See Herdeman v. City of Muskego*, 116 Wis. 2d 687, 343 N.W.2d 814 (Ct. App. 1983) (holding in a zoning case that a “substantial change” to the originally proposed ordinance could require reactivation of the procedural process of notice and hearing); *se also Oliveira v. City of Milwaukee*, 242 Wis. 2d 1, 16, 624 N.W.2d 117, 123 (2001) (“In *Herdeman* the Court of Appeals held that a change to a proposed amendment of a zoning ordinance must be substantial before a second notice and hearing are required.”) The question has been framed alternatively as whether the change alters “the fundamental character of the proposal.” *Oliveira*, 242 Wis. 2d at 16, 624 N.W.2d at 123.

The DNR’s decision to revise the regulatory status of the MERC permit from NSPS status constituted a “substantial change” in the air permit which would ordinarily require an amended public notice and hearing. However, in this instance, the failure of the Department to do so was “harmless error” because the permit was already set for an evidentiary contested case proceeding.

10. In considering the PTE in connection with a major source subject to PSD review, only such restrictions and pollution control efficiencies as are federally enforceable shall be allowed as reductions of the PTE. Wis. Admin. Code NR 405.02(25) “Federally enforceable” is defined in Wis. Admin. Code § NR 400.02(64). The reductions for the use of baghouses are not

currently federally enforceable because they do not provide any particular timeframe in which the baghouses must be used.

11. Fugitive Emissions means an emission from any emission point within a facility other than a flue or stack. Wis. Admin. Code § NR 400.02(64) Emissions from the coal pile are largely fugitive emissions.

12. Emissions of water-mist from the water-tower cannons are not from a “point source” because they do not issue from a “stack” or other device or opening designed or used to emit air contaminants into the ambient air. Wis. Admin. Code § NR 400.02(147)

ORDER

WHEREFORE, IT IS HEREBY ORDERED, that the air pollution control permit N0-01-PJH-722, be REMANDED to the DNR for PSD review pursuant to Chapter NR 405, and such further modifications of the permit as are set forth above and as are deemed necessary by the Department after undertaking PSD review.

Dated at Madison, Wisconsin on August 4, 2003.

STATE OF WISCONSIN
DIVISION OF HEARINGS AND APPEALS
5005 University Avenue, Suite 201
Madison, Wisconsin 53705-5400
Telephone: (608) 266-7709
FAX: (608) 267-2744

By _____
JEFFREY D. BOLDT
ADMINISTRATIVE LAW JUDGE

NOTICE

Set out below is a list of alternative methods available to persons who may desire to obtain review of the attached decision of the Administrative Law Judge. This notice is provided to insure compliance with Wis. Stat. § 227.48 and sets out the rights of any party to this proceeding to petition for rehearing and administrative or judicial review of an adverse decision.

1. Any party to this proceeding adversely affected by the decision attached hereto has the right within twenty (20) days after entry of the decision, to petition the secretary of the Department of Natural Resources for review of the decision as provided by Wisconsin Administrative Code NR 2.20. A petition for review under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.
2. Any person aggrieved by the attached order may within twenty (20) days after service of such order or decision file with the Department of Natural Resources a written petition for rehearing pursuant to Wis. Stat. § 227.49. Rehearing may only be granted for those reasons set out in Wis. Stat. § 227.49(3). A petition under this section is not a prerequisite for judicial review under Wis. Stat. §§ 227.52 and 227.53.
3. Any person aggrieved by the attached decision which adversely affects the substantial interests of such person by action or inaction, affirmative or negative in form is entitled to judicial review by filing a petition therefor in accordance with the provisions of Wis. Stat. §§ 227.52 and 227.53. Said petition must be filed within thirty (30) days after service of the agency decision sought to be reviewed. If a rehearing is requested as noted in paragraph (2) above, any party seeking judicial review shall serve and file a petition for review within thirty (30) days after service of the order disposing of the rehearing application or within thirty (30) days after final disposition by operation of law. Since the decision of the Administrative Law Judge in the attached order is by law a decision of the Department of Natural Resources, any petition for judicial review shall name the Department of Natural Resources as the respondent. Persons desiring to file for judicial review are advised to closely examine all provisions of Wis. Stat. §§ 227.52 and 227.53, to insure strict compliance with all its requirements.